What is claimed is:

1. A device, comprising:

an assembled structure of a plurality of carbonized carbon tubes, said assembled structure is prepared according to a process including the steps of:

coating a plurality of fibers with a carbonizable carbon-containing material to form a coating layer on each of said plurality of fibers;

assembling said plurality of coated fibers to form an assembled matrix;

binding said assembled matrix with one or more binding agents;

removing said plurality of fibers; and

carbonizing said coating layer and the residue of said fibers to form said assembled structure containing a plurality of carbonized carbon tubes.

2. The device according to claim 1, wherein said fibers are selected from the group consisting of monofilaments, yarns, woven cloths, non-woven fabrics, and combinations thereof.

3. The device according to claim 1, wherein the binding step utilizes a chemical material as the binding agent, selected from the group consisting of polymer, oligomer, resin, adhesive, sol gel, metal oxide, metal, ceramic, cement, epoxy resin, and combinations thereof.

4. The device according to claim 3, wherein the chemical material is thermally more stable than the coating material.

5. The device according to claim 3, wherein the chemical material is thermally less stable than the coating material.

6. The device according to claim 1, wherein said binding agent is a chemical reagent that is able to chemically or physically interact with the surfaces of said coating layers and result in interfacial bonding structures among said carbon tubes.

7. The device according to claim 1, wherein said binding agent is a chemical reagent that is able to physically wet or swell said coated fibers totally or in part and render said coated fibers sticking to or interpenetrating into each other at the contacted surfaces.

8. The device according to claim 1, wherein the binding step utilizes a crosslinking reagent as the binding agent, selected from the group consisting of peroxide, hydroperoxide, azo compound, redox initiator, photoinitiator, sulfur, and combinations thereof.

9. The device according to claim 1, wherein the binding step utilizes a binding agent that is carbonizable.

10. The device according to claim 1, wherein the binding step utilizes an energy beam as the binding agent, selected from the group consisting of lasers, ultraviolet light, visible light, high energy radiations, γ-ray, x-ray, electrons, high-speed particles, photons, and combinations thereof.

11. The device according to claim 1, wherein the binding step utilizes a reactive atmosphere as the binding agent, selected from the group consisting of plasma, hot air, ozone, and combinations thereof.

12. The device according to claim 1, wherein the binding step utilizes an energy flux as the binding agent, selected from the group consisting of microwave, infrared radiation, heat, and combinations thereof.

13. The device according to claim 1, wherein the binding step is further repeated utilizing the same or different types of binding agents.

14. The device according to claim 1, wherein the assembling step utilizes an assembling method selected from the group consisting of packing, weaving, knitting, netting, threading, sewing, stitching, stringing, wiring, tying, braiding, wrapping, binding, fastening, winding, stapling, and combinations thereof.

15. The device according to claim 1, wherein the removing step and carbonizing step are performed concurrently.

16. A device of an assembled structure, comprising:

a plurality of carbonized carbon tubes wherein said plurality of carbonized carbon tubes include:

carbonized coating material;

carbonized fiber residue; and

a binding element which binds the plurality of carbonized carbon tubes.

17. The device according to claim 16, wherein the binding element is a carbonized binding agent.

18. The device according to claim 16, wherein the binding element is interfacial covalent bonding structures at the contacted surfaces between said carbon tubes.

19. The device according to claim 16, wherein the binding element provides interfacial covalent bonds at the contacted surfaces between said carbon tubes.

20. The device according to claim 16, wherein the binding element provides inorganic network structures, which hold or bind said assembled structure of carbon tubes.

21. The device according to claim 16, wherein the binding element is a fused and interpenetrated interfacial structure of said carbonized coating material.

22. The device according to claim 16, wherein said assembled structure of carbon tubes is a rod or cylinder with the averaged axis of said carbon tubes being aligned along with the axis of said assembled structure.

23. The device according to claim 16, wherein said assembled structure of carbon tubes is a plate or mesh.

24. A method for making an assembled structure of carbon tubes, comprising the steps of:

coating a plurality of fibers with a coating material to form a coating layer over the fibers;

assembling said coated fibers into an assembled matrix;

binding said assembled matrix with one or more types of binding agents;

removing said fibers; and

carbonizing said coating layers and residue of said fibers to form said assembled structure of carbon tubes.

25. The method according to claim 24, wherein said fibers are selected from the group consisting of monofilaments, yarns, woven cloths, non-woven fabrics, and combinations thereof.

26. The method according to claim 24, wherein the binding step utilizes a chemical material as the binding agent, selected from the group consisting of polymer, oligomer, resin, adhesive, sol gel, metal oxide, metal, ceramic, cement, epoxy resin, and combinations thereof.

27. The method according to claim 26, wherein the chemical material is thermally more stable than the coating material.

28. The method according to claim 26, wherein the chemical material is thermally less stable than the coating material.

29. The method according to claim 24, wherein said binding agent is a chemical reagent that is able to chemically or physically interact with the surfaces of said coating layers and result in interfacial bonding structures among said carbon tubes.

30. The method according to claim 24, wherein said binding agent is a chemical reagent that is able to physically wet or swell said coated fibers totally or in part and render said coated fibers sticking to or interpenetrating into each other at the contacted surfaces.

31. The method according to claim 24, wherein the binding step utilizes a crosslinking reagent as the binding agent, selected from the group consisting of peroxide, hydroperoxide, azo compound, redox initiator, photoinitiator, sulfur, and combinations thereof.

32. The method according to claim 24, wherein said binding agent is carbonizable.

33. The method according to claim 24, wherein the binding step utilizes an energy beam as the binding agent, selected from the group consisting of lasers, ultraviolet light, visible light, high energy radiations, γ-ray, x-ray, electrons, high-speed particles, photons, and combinations thereof.

34. The method according to claim 24, wherein the binding step utilizes a reactive atmosphere as the binding agent, selected from the group consisting of plasma, hot air, ozone, and combinations thereof.

35. The method according to claim 24, wherein the binding step utilizes an energy flux as the binding agent, selected from the group consisting of microwave, infrared radiation, heat, and combinations thereof.

36. The method according to claim 24, wherein the binding step is further repeated utilizing the same or different types of binding agents.

37. The method according to claim 24, wherein the assembling step utilizes an assembling method selected from the group consisting of packing, weaving, knitting, netting, threading, sewing, stitching, stringing, wiring, tying, braiding, wrapping, binding, fastening, winding, stapling, and combinations thereof.

38. The method according to claim 24, wherein the removing step and carbonizing step are performed concurrently.